

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 2

PATENT

IN THE CLAIMS:

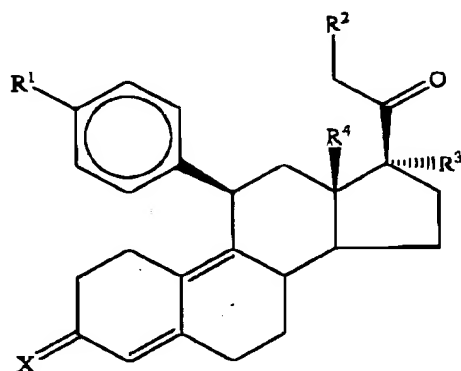
Please cancel claim 16 without prejudice or disclaimer.

Please amend claim 1 and add new claims 61-65 as follows.

This listing of claims will replace all versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A compound having the general formula:



wherein:

$R^1$  is a member selected from the group consisting of  $-OCH_3$ ,  $-SCH_3$ ,  $-N(CH_3)_2$ ,  $-NHCH_3$ ,  $-NC_4H_8$ ,  $-NC_5H_{10}$ ,  $-NC_4H_8O$ ,  $-CHO$ ,  $-CH(OH)CH_3$ ,  $-C(O)CH_3$ ,  $-O(CH_2)_2N(CH_3)_2$ ,  $-O(CH_2)_2NC_4H_8$ , and  $-O(CH_2)_2NC_5H_{10}$ ;

$R^2$  is a member selected from the group consisting of hydrogen, halogen, alkyl, acyl, hydroxy, alkoxy, acyloxy, alkylcarbonate, cypionyloxy, S-alkyl,  $-SCN$ , S-acyl, and  $-OC(O)R^6$ , wherein  $R^6$  is a member selected from the group consisting of alkyl, alkoxy ester and alkoxy;

$R^3$  is a member selected from the group consisting of alkyl-alkoxy, alkoxy and acyloxy;

$R^4$  is a member selected from the group consisting of hydrogen and alkyl;

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 3

PATENT

14 X is a member selected from the group consisting of =O and =N-OR<sup>5</sup>, wherein R<sup>5</sup>  
15 is a member selected from the group consisting of hydrogen and alkyl; and  
16 wherein:  
17 if R<sup>1</sup> is -C(O)CH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub> or -NHCH<sub>3</sub>, R<sup>2</sup> is hydrogen, R<sup>3</sup> is acetyloxy and R<sup>4</sup>  
18 is methyl, then X is other than =O; and  
19 if R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>, R<sup>2</sup> is hydroxy, R<sup>4</sup> is alkyl and X is =O, then R<sup>3</sup> is other than  
20 hydroxy.

1 2. (Original) The compound in accordance with claim 1, wherein R<sup>1</sup> is a member  
2 selected from the group consisting of -N(CH<sub>3</sub>)<sub>2</sub>, -NC<sub>4</sub>H<sub>8</sub>, -NC<sub>5</sub>H<sub>10</sub>, -NC<sub>4</sub>H<sub>8</sub>O, -C(O)CH<sub>3</sub>,  
3 -O(CH<sub>2</sub>)<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -O(CH<sub>2</sub>)<sub>2</sub>NC<sub>4</sub>H<sub>8</sub>, and -O(CH<sub>2</sub>)<sub>2</sub>NC<sub>5</sub>H<sub>10</sub>.

1 3. (Previously amended) The compound in accordance with claim 1, wherein R<sup>2</sup>  
2 is a member selected from the group consisting of hydrogen, acyloxy, alkoxy, -SAc, -SCN,  
3 -OC(O)CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, and -OC(O)R<sup>6</sup>, wherein R<sup>6</sup> is a member selected from the group consisting  
4 of alky, alkoxy ester and alkoxy.

1 4. (Withdrawn) The compound in accordance with claim 3, wherein R<sup>2</sup> is  
2 -OC(O)R<sup>6</sup> and R<sup>6</sup> is a member selected from the group consisting of -CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>OCH<sub>3</sub> and  
3 -OCH<sub>3</sub>.

1 5. (Original) The compound in accordance with claim 1, wherein R<sup>2</sup> is an alkoxy  
2 selected from the group consisting of methoxy, ethoxy, vinyloxy, ethynyloxy and  
3 cyclopropyloxy.

1 6. (Previously amended) The compound in accordance with claim 1, wherein R<sup>3</sup>  
2 is a member selected from the group consisting of alkoxy and acyloxy.

1 7. (Original) The compound in accordance with claim 1, wherein R<sup>4</sup> is alkyl.

1 8. (Original) The compound in accordance with claim 1, wherein X is =O.

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 4

PATENT

1                   9. (Withdrawn) The compound in accordance with claim 1, wherein X is  
2   =N-OR<sup>5</sup>.

1                   10. (Withdrawn) The compound in accordance with claim 1, wherein:  
2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is hydrogen;  
4                   R<sup>3</sup> is acyloxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.

1                   11. (Withdrawn) The compound in accordance with claim 10, wherein R<sup>3</sup> is  
2   acyloxy selected from the group consisting of -OC(O)H, -OC(O)CH<sub>2</sub>CH<sub>3</sub> and -OC(O)C<sub>6</sub>H<sub>13</sub>.

1                   12. (Withdrawn) The compound in accordance with claim 1, wherein:  
2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is hydrogen;  
4                   R<sup>3</sup> is methoxymethyl;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.

1                   13. (Withdrawn) The compound in accordance with claim 1, wherein:  
2                   R<sup>1</sup> is -NC<sub>4</sub>H<sub>8</sub>;  
3                   R<sup>2</sup> is hydrogen;  
4                   R<sup>3</sup> is acetoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.

1                   14. (Withdrawn) The compound in accordance with claim 1, wherein:  
2                   R<sup>1</sup> is -NC<sub>5</sub>H<sub>10</sub>;

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 5

PATENT

3                     $R^2$  is hydrogen;  
4                     $R^3$  is acetoxy;  
5                     $R^4$  is methyl; and  
6                    X is =O.

1                    15. (Withdrawn) The compound in accordance with claim 1, wherein:

2                     $R^1$  is  $-NC_4H_8O$ ;  
3                     $R^2$  is hydrogen;  
4                     $R^3$  is acetoxy;  
5                     $R^4$  is methyl; and  
6                    X is =O.

16.        Cancelled.

1                    17. (Withdrawn) The compound in accordance with claim 1, wherein:

2                     $R^1$  is  $-SCH_3$ ;  
3                     $R^2$  is hydrogen;  
4                     $R^3$  is acetoxy;  
5                     $R^4$  is methyl; and  
6                    X is =O.

1                    18. (Previously amended) The compound in accordance with claim 1, wherein:

2                     $R^1$  is  $-N(CH_3)_2$ ;  
3                     $R^2$  is hydrogen;  
4                     $R^3$  is methoxy;  
5                     $R^4$  is methyl; and  
6                    X is =O.

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 6

PATENT

1           19. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-NC_5H_{10}$ ;

3                  $R^2$  is hydrogen;

4                  $R^3$  is methoxy;

5                  $R^4$  is methyl; and

6                  $X$  is  $=O$ .

1           20. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-NC_5H_{10}$ ;

3                  $R^2$  is acetoxy;

4                  $R^3$  is acetoxy;

5                  $R^4$  is methyl; and

6                  $X$  is  $=O$ .

1           21. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-C(O)CH_3$ ;

3                  $R^2$  is acetoxy;

4                  $R^3$  is acetoxy;

5                  $R^4$  is methyl; and

6                  $X$  is  $=O$ .

1           22. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-C(O)CH_3$ ;

3                  $R^2$  is  $-SAc$ ;

4                  $R^3$  is acetoxy;

5                  $R^4$  is methyl; and

6                  $X$  is  $=O$ .

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 7

PATENT

1                   23. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -C(O)CH<sub>3</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is methoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   24. (Original) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is methoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   25. (Original) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is ethoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   26. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -NC<sub>4</sub>H<sub>9</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is methoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 8

PATENT

1                   27. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -NC<sub>5</sub>H<sub>10</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is methoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   28. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -NC<sub>5</sub>H<sub>10</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is acetoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   29. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -C(O)CH<sub>3</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is acetoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   30. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -O(CH<sub>2</sub>)<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is acetoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 9

PATENT

1                   31. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -O(CH<sub>2</sub>)<sub>2</sub>NC<sub>4</sub>H<sub>8</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is acetoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   32. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -O(CH<sub>2</sub>)<sub>2</sub>NC<sub>5</sub>H<sub>10</sub>;

3                   R<sup>2</sup> is methoxy;

4                   R<sup>3</sup> is acetoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   33. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;

3                   R<sup>2</sup> is -OC(O)CH<sub>2</sub>CH<sub>3</sub>;

4                   R<sup>3</sup> is acetoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.

1                   34. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;

3                   R<sup>2</sup> is -OC(O)CH<sub>2</sub>OCH<sub>3</sub>;

4                   R<sup>3</sup> is acetoxy;

5                   R<sup>4</sup> is methyl; and

6                   X is =O.



Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 10

PATENT

1           35. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-N(CH_3)_2$ ;

3                  $R^2$  is  $-OC(O)OCH_3$ ;

4                  $R^3$  is acetoxy;

5                  $R^4$  is methyl; and

6                 X is =O.

1           36. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-N(CH_3)_2$ ;

3                  $R^2$  is  $-OCH=CH_2$ ;

4                  $R^3$  is acetoxy;

5                  $R^4$  is methyl; and

6                 X is =O.

1           37. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-N(CH_3)_2$ ;

3                  $R^2$  is  $-OCH=CH_2$ ;

4                  $R^3$  is methoxy;

5                  $R^4$  is methyl; and

6                 X is =O.

1           38. (Withdrawn) The compound in accordance with claim 1, wherein:

2                  $R^1$  is  $-N(CH_3)_2$ ;

3                  $R^2$  is  $-OCH=CH_2$ ;

4                  $R^3$  is ethoxy;

5                  $R^4$  is methyl; and

6                 X is =O.

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 11

PATENT

1           39. (Withdrawn) The compound in accordance with claim 1, wherein:

2                $R^1$  is  $-N(CH_3)_2$ ;

3                $R^2$  is  $-SCN$ ;

4                $R^3$  is acetoxy;

5                $R^4$  is methyl; and

6                $X$  is  $=O$ .

1           40. (Withdrawn) The compound in accordance with claim 1, wherein:

2                $R^1$  is  $-N(CH_3)_2$ ;

3                $R^2$  is  $-OC(O)H$ ;

4                $R^3$  is  $-OC(O)H$ ;

5                $R^4$  is methyl; and

6                $X$  is  $=O$ .

1           41.     Cancelled.

1           42. (Withdrawn) The compound in accordance with claim 1, wherein:

2                $R^1$  is  $-N(CH_3)_2$ ;

3                $R^2$  is  $-OC(O)CH_2N(CH_3)_2$ ;

4                $R^3$  is acetoxy;

5                $R^4$  is methyl; and

6                $X$  is  $=O$ .

1           43. (Withdrawn) The compound in accordance with claim 1, wherein:

2                $R^1$  is  $-NC_5H_{10}$ ;

3                $R^2$  is hydrogen;

4                $R^3$  is acetoxy;

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 12

PATENT

5                   R<sup>4</sup> is methyl; and  
6                   X is =N-OR<sup>5</sup>, wherein R<sup>5</sup> is hydrogen.

1                   44. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is hydrogen;  
4                   R<sup>3</sup> is methoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =N-OR<sup>5</sup>, wherein R<sup>5</sup> is hydrogen.

1                   45. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -NC<sub>5</sub>H<sub>10</sub>;  
3                   R<sup>2</sup> is hydrogen;  
4                   R<sup>3</sup> is methoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =N-OR<sup>5</sup>, wherein R<sup>5</sup> is hydrogen.

1                   46. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is methoxy;  
4                   R<sup>3</sup> is methoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =N-OR<sup>5</sup>, wherein R<sup>5</sup> is hydrogen.

1                   47. (Withdrawn) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -NHCH<sub>3</sub>;  
3                   R<sup>2</sup> is methoxy;  
4                   R<sup>3</sup> is acetoxy;  
5                   R<sup>4</sup> is methyl; and

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 13

PATENT

6 X is =O.

1 48. (Withdrawn) The compound in accordance with claim 1, wherein:

2 R<sup>1</sup> is -NHCH<sub>3</sub>;

3 R<sup>2</sup> is acetoxy;

4 R<sup>3</sup> is acetoxy;

5 R<sup>4</sup> is methyl; and

6 X is =O.

1 49. (Original) A pharmaceutical composition comprising an effective amount of  
2 a compound in accordance with claim 1 and a pharmaceutically acceptable excipient.

1 50. (Withdrawn) A method of producing an antiprogestational effect in a patient,  
2 said method comprising administering to said patient an effective amount of a compound in  
3 accordance with claim 1.

1 51. (Withdrawn) A method of inducing menses in a patient, said method  
2 comprising administering to said patient an effective amount of a compound in accordance with  
3 claim 1.

1 52. (Withdrawn) A method of treating endometriosis, said method comprising  
2 administering to said patient an effective amount of a compound in accordance with claim 1.

1 53. (Withdrawn) A method of treating dysmenorrhea, said method comprising  
2 administering to said patient an effective amount of a compound in accordance with claim 1.

1 54. (Withdrawn) A method of treating endocrine hormone-dependent tumors,  
2 said method comprising administering to said patient an effective amount of a compound in  
3 accordance with claim 1.

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 14

PATENT

1           55. (Withdrawn) A method of treating meningiomas, said method comprising  
2 administering to said patient an effective amount of a compound in accordance with claim 1.

1           56. (Withdrawn) A method of treating uterine fibroids in a patient, said method  
2 comprising administering to said patient an effective amount of a compound in accordance with  
3 claim 1.

1           57. (Withdrawn) A method of inhibiting uterine endometrial proliferation in a  
2 patient, said method comprising administering to said patient an effective amount of a compound  
3 in accordance with claim 1.

1           58. (Withdrawn) A method of inducing labor, said method comprising  
2 administering to a patient an effective amount of a compound in accordance with claim 1.

1           59. (Withdrawn) A method of contraception, said method comprising  
2 administering to a patient an effective amount of a compound in accordance with claim 1.

1           60. (Withdrawn) A method of postcoital contraception, said method comprising  
2 administering to a patient an effective amount of a compound in accordance with claim 1.

1           61. (New) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is methoxy;  
4                   R<sup>3</sup> is acetoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.

1           62. (New) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is acetoxy;

Hyun K. Kim, *et al.*  
Application No.: 09/526,855  
Page 15

PATENT

4                   R<sup>3</sup> is acetoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.

1                   63. (New) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is ethoxy;  
4                   R<sup>3</sup> is acetoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.

1                   64. (New) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is -OC(O)CH<sub>2</sub>CH<sub>2</sub>C<sub>3</sub>H<sub>9</sub>;  
4                   R<sup>3</sup> is acetoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.

1                   65. (New) The compound in accordance with claim 1, wherein:

2                   R<sup>1</sup> is -N(CH<sub>3</sub>)<sub>2</sub>;  
3                   R<sup>2</sup> is hydroxy;  
4                   R<sup>3</sup> is acetoxy;  
5                   R<sup>4</sup> is methyl; and  
6                   X is =O.